

Designing For The Workplace:
Connecting the Technology Grunts

Joseph B. Bustillos

Grade = A-

EDET 770B: Learning & Design II

Linda Polin, Ph.D

April 2005

s talley 4/29/05 7:23 PM

Comment: Comments based on rubric.

APA: There are some places where you needed to add citations and others where your citations needed to be more complete.

Problem Statement: You covered this in the "Defining the Object" section which is fine but you might have added another heading to indicate this.

Change Process: You seem to indicate that you will follow Kotter's eight step process, but you didn't really describe why you thought this process would fit the situation best. As we discussed, there are other models, and part of what you were to show here is why the process you chose fit your situation best.

Visioning: You gave your vision but you didn't really show how you would involve others in getting them to make this vision their own. What visioning actions would you take to help them to think through this process themselves?

Communication: You make it clear that this will have to be multi-faceted and you give support for this, both practical and from the literature. But I am not sure what you will be communicating to your peers. What will your message consist of? What value statement will you be communicating?

Nurturing community, diffusion of innovation, culture, and barriers were all covered to some extent. But it felt as if your heart just isn't in this because you can't give details for something you might not be able to carry out. I was intrigued by your description of the results of the grant. I think it is a fundamental flaw with the grant-making process. Grants aren't given to organizations that get buy-in gradually and do pilot projects and phase in things over time and then make changes based on what they find. Successful grant writers write grants based on a solid central concept, then build a team to implement the concept, knowing this will likely need to change over time. But that doesn't work very well with the grants, and funding, and reporting in all cases. Personal leadership - Excellent summary. Hopefully finding others will round out the team and balance your strengths and weaknesses. I think you do this at your church...seems like you could do this at work as well: -)

s talley 4/29/05 7:23 PM

Comment: And? EDET 762 ...you need to be careful about recycling other papers. I like reading Linda's comments from prior drafts, but you might want to think about eliminating them when handing in a new paper with other readers.

Connecting The Technology Grunts

He drew a circle that shut me out --
Heretic, rebel, a thing to flout.
But love and I had the wit to win:
We drew a circle that took him in.
Edwin Markham

It is amazing how teaching can be the most solitary and social jobs all at the same time. It doesn't take much to imagine that no one can possibly understand what teachers go through to get through a day. In an environment where working together is among the first things students are taught from their very first days of kindergarten, the same message does not seem to really reach those doing the teaching. Thus, not all appreciate the greater strength one finds working as part of team versus trying to go at it alone. Nonetheless, whether it's the pairing up of a new teacher with a veteran or just a group of colleagues, there is something wise in working together.

Defining the Practice

"A community of practice is an intrinsic condition for the existence of knowledge, not least because it provides the interpretive support necessary for making sense of its heritage" (Lave & Wenger, p. 98). At one time my mother, sister, brother-in-law and I all worked for the phone company. Even though we did not work in the same areas, we spoke the same acronyms and knew the same job stresses, such that non-phone company relatives were often left out of conversations when we would gather at family functions. I have had the same sense when I have attended social functions with teachers, noting the passive isolation of the few non-teachers among the bunch.

Language, mindset, general goals, expectations, and participant replication all point to educators as being a "practice." For the purposes of this project the practice will be the K-12 schools that make up the Long Beach Unified school district. My own work site, Twain

s talley 4/29/05 7:23 PM

Comment: Year?

Elementary, is a K-5 school, but the scope of my project will reach beyond my immediate setting to potentially every school in this district.

Defining the Object

The group or object that will be directly addressed in this project will be the district's school site technology coordinators, whether their duties are full-time or adjunct. My project will address the question: Whom does the site technology person pair up with for support, leadership, task development and fellowship?

Currently this district's school site technology coordinators are poorly supported except in terms of being kept up to date on changes in district policy as it relates to the job. The few meetings per year largely consist of the district technology director and the IT director (or their representatives) telling the technology coordinators information that could easily be communicated via memo or email. Instead of fostering a sense of being valued or camaraderie, more than a few of the meetings have been adversarial because of the top-down unidirectional authoritarian nature of the presentations. Over the course of the past two years, IT has consolidated more and more power to govern the district's network and all the computers connected to it, to the point where work orders need to be issued in order to install a single application on a single computer and appropriate clearances are needed to install or uninstall printers. One doesn't get the sense that the services of these gathered tech coordinators are valued.

Visioning

The most pathetic person in the world is someone who has sight, but has no vision. Helen Keller

At present this group, the object of this project, is not a functioning community.

However, it is a safe assumption that the educators who would make up this group would share

Ipoin 4/29/05 7:23 PM

Comment: A worthy question. How are they connected to the larger practice, even at LACOE, or better, at CUE, ISTE, and elsewhere.

Ipoin 4/29/05 7:23 PM

Comment: Yeah, this is one way that battle goes. There should be a rule that goes something like, if you 'own' the system you own the support, and that means for end users as well as for systems. I would be willing to be they DON'T want to do support. On the other hand, I think an incredible opportunity awaits here. I have long bemoaned the TechCoord positions because a) it lets teachers maintain their dependence on others to solve their relatively simple problems, and b) it continues to leave tech isolated from curriculum and thus creates the very problem it needs to solve: integrating technology into the curriculum. You should, instead, find prof'l dev and tech support integrated into the curric dept. of the district. Have you considered approaching those people to support THEIR efforts? That might also be a career move for you.

the district's mission "to effectively leverage and optimize all resources, human and fiscal, to support a standards-based curriculum to maximize student achievement" (Technology Curriculum Office, 2005, para. 1). The district's tool of choice is the creation of their "Technology Use Plan." The difference between the district's statement and the emphasis of this project is that the focus would be on the creation and support of a community comprised of the technology coordinators and computer lab teachers to better serve the human resources part of the district's mission. The vision is to see these individuals support one another both in terms of the sharing expertise and on-the-job discoveries and allow for the social need to be heard and possibly understood.

Accessing the Need

As previously described my intended group are the technology coordinators of my district. As a group they are computer-savvy educators with overly crowded teaching schedules, more requests to fix someone's computer hardware/software problems than hours in the day, and shrinking or none-existent budgets to maintain much less grow their technology resources. Consequently the technology tool intended to help support this group will need to be free (open-source), because of the coordinators' overly filled schedule the tool will need to be accessible anytime/anyplace, and require virtually no training for the end-users. The tool will also need to be password protected in order to maintain the integrity of the intended community (the tech coordinators of this one district). To promote the needed honest voicing of concerns and complaints the tool will also need to allow the user to determine the level of anonymity while posting or using the tool. The basic idea is for the tool to assist in the creation of community by promoting dialog and encouraging the sharing of strengths and needs among themselves.

s talley 4/29/05 7:23 PM

Comment: This is your vision. But a significant part of visioning also refers to the process of getting buy in to a vision from others, by creating a vision that others have helped to create as well. Where do the other tech coordinators come into this part of the process?

Ipolin 4/29/05 7:23 PM

Comment: Hmm, a peer to peer solution eh? What about also finding some connection to sources outside the district? Even if this is just one guy's job as 'broker' for the group? And my thought, from a policy point of view, is that this may need to run on equipment that is NOT owned by the district so that there are never any legal issues with anything the coordinators say to each other. This way they truly can feel free to speak and to share, without any "big brother" concerns. Otherwise there are all the legal issues that would be imposed by the district.

The Right Tool for the Right Job

There were numerous web tools in the Open Source community, of varying levels of complexity that could meet the needs of this job. On the more complex end of the spectrum of tools considered is the portal package, Geeklog. Unlike web solutions such as Bloki, this tool would require that I provide or find the physical server needed to host the tool. If I were to do the installation on my own, I would also need to have some working knowledge of web-databases such as mySQL and the scripting language, PHP. This level of complexity would also provide an equivalent level of control and being less at the whim of a host company. Geeklog offers whatever level of customization one can bring to the project. According to Geeklog's documentation it "allows you to create your own virtual community area, complete with user administration, story posting, messaging, comments, polls, calendar, weblinks, and more!" The documentation lists the following eleven features:

- User-system, allowing members of the public to register for your site and submit stories.
- Comment system, allowing users to comment on posts made to your site.
- Block system, allowing you to put information anywhere on your site.
- Plugin system that allows you to extend Geeklog, without having to code any new PHP.
- Theme system that allows users to select what layout they want to view.
- Excellent security model that allows you to give users control over certain aspects of the site with no need to worry.
- Site Statistics that show you the most popular areas of your site.
- Link system that allows users to add links to the site.
- Calendar System that lets you and your user add up-and-coming events.
- Allow users to email stories to their friends.

Albeit, much more difficult to implement, Geeklog seems to be a more complete solution to my design to provide a means to create support for the technology coordinators in my school district.

Ipelin 4/29/05 7:23 PM

Comment: Yeah, the more I look at our uses of Geeklog the more I like the product. Besides, you're tech guys, you can stretch a little to get the expertise up to speed.

At this time it is unknown whether the chat features will function behind my district's firewall.

Change Process

Based on Kotter's (1996, p. 21) this project is very much in step 1 – Establish A Sense of Urgency and step 2 – Creating the Guiding Coalition. A couple years back, during my OMAET program, I tried to pull together a group of tech coordinators from my former and current districts for the purposes of mutual support but the difficulty of mapping out adequate meeting times eventually killed the group. Since then I've discussed with several fellow coordinators the need for us to work together but up until now, there just hasn't been the time or tools to make it happen.

Those who would make up this group pretty much universally recognize the sense of urgency and recognize the need. For example, last spring the district sent letters to elementary school principals to pass on to their computer lab teachers saying that they had about a week to apply for a temporary single-subject science/math/computer credential or they'd be out of NCLB compliance for teaching outside their subject area. There was a definite sense of urgency in the flood of email that followed as teachers with 20-years in their computer labs wondered if they were going to lose their jobs because of this regulation. Thus, the interest is there. It is now a matter of creating the guiding coalition and setting up the previously described tool, Geeklog.

Communication

"Vision is usually communicated most effectively when many different vehicles are used: large group meetings, memos, newspapers, posters, informal one-on-one talks" (Kotter, 1996, p. 93). The tool is primarily a virtual communications tool, but the tool alone won't get the job done. The tool is meant to serve the beginnings and continuation of this community. Thus, it will be equally important that the beginnings of this group be seeded with plenty of informal face-to-face meetings, phone calls and quick notes.

s talley 4/29/05 7:23 PM

Comment: This doesn't need to be capitalized. It is in the book because it is a heading.

s talley 4/25/05 1:08 PM

Deleted: Eight-Stage Process of Creating Major Change

s talley 4/29/05 7:23 PM

Comment: Do you have a similar, time-sensitive issue that is imposing urgency now? Many change processes are stimulated by outside requirements such as the NCLB requirements. That may be only the initial reason...not the true underlying thrust. You seem to have other urgencies but if no one can make the time...perhaps things aren't urgent enough. You make time for THE most urgent things.

Having worked with teachers for 10-years, I'm quite familiar with the need to repeat messages several times via different media in order to be "heard" once. It's just the nature of the over-crowded teachers' lives that, until something becomes routine, it needs to be "announced" several times (without being condescending or "bothered" by the need to repeat messages). The interesting thing is that, though the project is about using a virtual tool to support the needs of these technology teachers, initial face-to-face and otherwise personal communication will be just as if not more important than the creation of the virtual portal itself.

Nurturing Communities

Communication leads to community, that is, to understanding, intimacy and mutual valuing. Rollo May

The point of using the tool is to take the districts' disparate collection of technology coordinators and computer lab teachers and find a way for them to easily support, encourage and pool their expertise with one another and in turn support, encourage and foster the technology competency of their sites' staff. As of last Spring there were over thirty tech coordinators and computer lab teachers/instructors in Long Beach Unified School District. If just four or five who work in relative proximity to one another were encouraged to work together and share their expertise, how much less frustrating would their jobs be? Now, if four or five such self-selecting groups were to grow out of the use of this tool and support of these parallel sub-groups, then the majority of the schools in this district would find themselves served by the combined resources of all of these teachers instead of the harried attention of just one teacher.

Barriers – Planning for Pitfalls

In the course of reassessing technology's failure to level the educational playing-field, Warschauer cites several studies regarding the inability of Internet-based instruction to be as

s talley 4/29/05 7:23 PM

Comment: And what will your message be? Part of being prepared for this is having your 10 second spiel ready. I realize that in your current situation you might not be able to carry this out. But who knows, maybe it will be having the 10 second spiel at the ready that will lead to the next opportunity. It's happened to me...and to other students of mine.

s talley 4/29/05 7:23 PM

Comment: Citation?

s talley 4/29/05 7:23 PM

Comment: This is the "why" behind community. The question is "how"...how will you get these individuals to coalesce into a community?

effective as traditional face-to-face instruction (2003, p. 146). In a 2000 study by Feldman,

Konold and Coulter, Warschauer quotes:

Our reservations are based on how difficult it has proved to get substantive discussions going among participating classroom... Given the timing, monitoring, nuanced voice, eye contact, and on-the-spot decision making required to engage students in reflective discussion, online discussions are a poor substitute by comparison. Most simply, the necessary subtleties of face-to-face interaction have no sufficient analogue online. (Warschauer, 2003, p. 146; Feldman, 2000)

In the instances when Internet-based instruction has been successful Warschauer notes, “the central feature enabling effective use of Internet-based materials and distance communication was a strong local teacher working closely with students in face-to-face communication” (p. 146). So, when Internet-based instruction is used to replace face-to-face instruction as many as 73% of high school students, for example, drop out before finishing the course (p. 147).

While this project will depend heavily on the use of an Internet portal, the project is meant to be a “blended” project using face-to-face time as well as the portal. The tool is meant to leverage the technology so that community exchange and support is not limited to only when members can meet in a face-to-face situation. Much like Pepperdine’s OMAET and Online Ed.D. programs, a bit of initial face-to-face time or at least more direct communication will be needed before the portal could really be used in a meaningful way.

As noted in the section about Nurturing Communities, there should not be too much difficulty finding technology coordinators who share an understanding of the benefits that would be gained by working together. What might be more problematic is finding that initial time to meet face-to-face in order to form a sense of community, to get to know one another and establish some social capital with one another. To that end, it might be a good idea to begin to communicate with the body of possible members between now and the end of the school year to

determine the actual level of interest and map out possible meeting times before, during or shortly before the end of the summer break.

Another possible problem with this project is if the district, which has across the board blocked all forms of chat and IM behind the district firewall, decides that this group also represents some kind of security risk and blocks either the ports used to communicate or the website's URL altogether. The best means of addressing this concern would be to directly communicate with the technology curriculum coordinator and director of information technology with my proposal to create this portal and *intentions* to encourage the creation of a community of technology coordinators. I'd previously considered whether to ask to have this portal hosted on the district's servers, but given their tendency to want to present a unified face to public about our technology program and issues of "ownership" I think that there will be less headaches if I host the portal myself and just ensure to monitor the discussion groups so that specific district representative are not "hung in effigy." It may become a sticky issue, but with assurances to maintain a sense of propriety, that we are all working to better our programs, the need to censure and the freedom of those directly involved might be maintained.

A third possible problem with this project is that as of this writing I am not sure that I will either be employed by this district in the Fall and/or whether I will be in a technology coordinator position myself. Additionally, given that the budget problem that has led to my own questioned future, is not limited to my own school site, it is unknown how many of the thirty-plus technology coordinators/computer lab teachers/instructors will also be at their posts come the Fall of 2005. There is no simple solution to this problem except to continue to look for that lateral move that will enable me to continue with planned project.

Diffusion of Innovation

s talley 4/25/05 1:39 PM

Deleted: intentions

s talley 4/29/05 7:23 PM

Comment: Maybe this is the crisis that could coalesce the community? Maybe this is what would help you all come together....a common sense of concern about the future, your lack of knowing, trying to figure out how to make things work in this district?

I have worked in large multi-million dollar technology implementation programs such as those described by Warschauer (p. 2, 5). Out of a teaching staff of thirty, ten requested transfers after the first year of a three-year Magnet grant. Most of the teachers who left cited that they didn't feel like their voices had been heard when the grant was originally proposed almost two-years before its implementation. The issues actually ran much deeper than this explanation, but it was enough for me to see the wisdom of using small-scale piloting programs before launching school-wide or district-wide changes (Bustillos, 2001, para. 23). Thus, in this instance, having four to six tech coordinators sign on would be a good start. Once a foothold is established than other groups of four to six can be encouraged to join or begin their own pilot sub-group.

Culture

When the possibility presented itself at my previous school that we might actually get the Magnet grant and especially when all of the expensive equipment started to roll in, very few of us seemed to ask about the relevance of using video journalism as a means of improving test scores with elementary school students, 99% of whom had come to this school in Kindergarten speaking no English. The literacy connections that we'd made in our proposal were self-serving and naive when compared to the amount of work that would needed to produce a single video much less a series of ongoing videos created by students who previously had never held a digital video camera. The opportunity was incredible but after three years the school continued to test poorly and after the grant the school moved to a concentrated reading program but still failed to improve its test scores by much. Here was a clear case in which, regardless of our sincere endeavors, the technology did little to address the underlying problems related to the school's poor testing performances. It was a solution that did not clearly match the problem.

Warschauer makes a big deal about the cultural relevance of our technological implementations. In the cases that he considered successful the projects were more about addressing recognized community needs with technology than about any kind of technology rollout as the objective (p. 127). Considering the expense of technology and the scarcity of funds the importance of genuine relevance cannot be underestimated. In this project, while the implementation of technology is somewhat of a given, it is still a matter of matching the genuine needs with whatever solutions, technology or otherwise, that will be created. Of greater significance is the possibility of enabling the technology grunts in the field to ask the important questions of relevance and find appropriate solutions of which technology is just another component part, instead of being the major resource consumer.

s talley 4/29/05 7:23 PM

Comment: You only need to give a page citation if you are using a direct quote. You do need to give a citation with the date, however.

Personal Leadership

My role will be to begin the portal and encourage the other tech coordinators to take part in this resource. The actual technology implementation will be something of a challenge, but of greater demand will be maintaining a consistent promotion of the concept that we need to work together and that this might be a means towards that end. I do not have any problems being the grunt in the field, and can very much relate to all of the various demands and taken for granted nature of the job. Being promotional and aggressive will present a definite challenge.

Conclusion

The most basic and powerful way to connect to another person is to listen. Just listen. Perhaps the most important thing we ever give each other is our attention.... A loving silence often has far more power to heal and to connect than the most well-intentioned words. Rachel Naomi Remen

s talley 4/29/05 7:23 PM

Comment: Citation?

The technology coordinators are a resource more valuable than the district's precious physical network. But the way things are being managed, administration has the hierarchy all upside down. I'm hoping that implementing Geeklog will address the design of my project to look for ways to bring the undervalued technology coordinators together, to give them voice and help

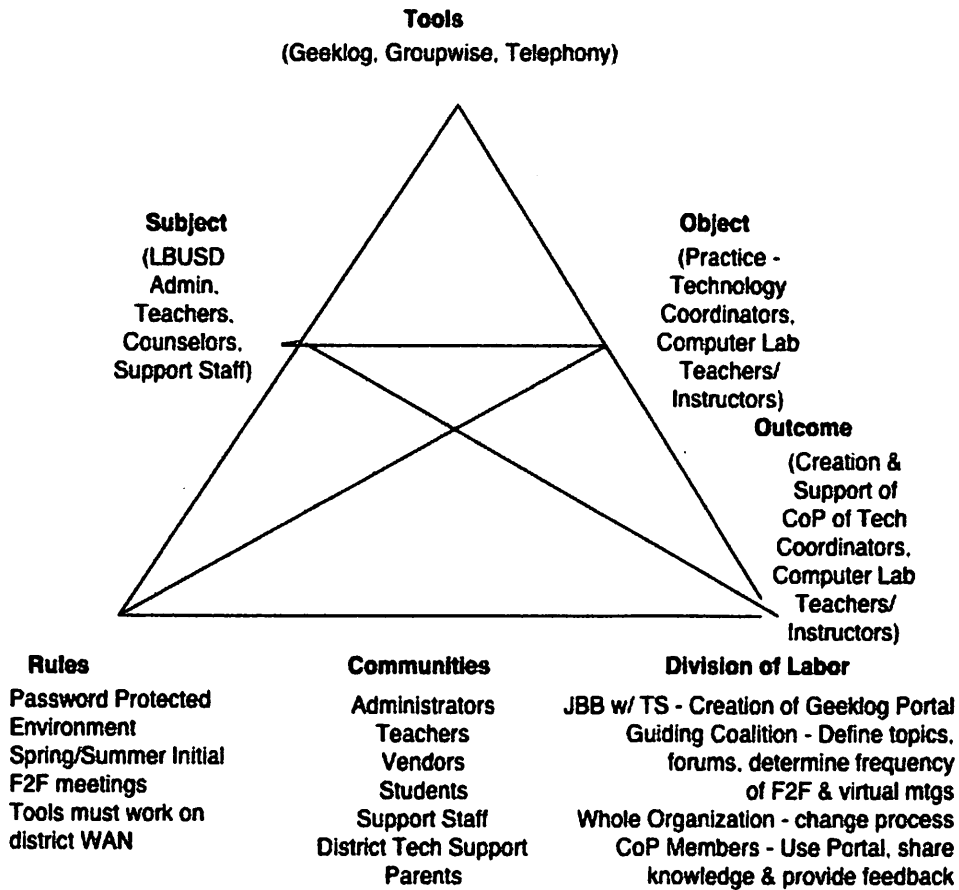
them develop strategies to do their job or change it if the well-intended restrictions get in the way of their over-all function as educators.

We don't accomplish anything in this world alone ... and whatever happens is the result of the whole tapestry of one's life and all the weavings of individual threads from one to another that creates something. Sandra Day O'Connor

s talley 4/29/05 7:23 PM

Comment: Never thought I'd actually really say that I might quote Sandra Day O'Connor, but this is a nice ending. Again, you need the citation : -)

Activity Theory of LBUSD Implementing a Portal to foster and support
a Tech Coordinators/Computer Lab Teachers CoP



References

- Bustillos, Joseph (2001). *An Observational Essay on the Nature of Success*. Pepperdine University OMAET project, EDC633. Retrieved 4/15/2005 from http://hale.pepperdine.edu/%7Ejbbustil/pages/omaet4/pages/633_Success.htm
- Day O'Connor, Sandra (n.d.). Wisdom Quotes. Retrieved January 5, 2005 from <http://www.wisdomquotes.com/002436.html>
- Feldman, A., C. Konold, and B. Coulter (2000). *Network science, a decade later: The Internet and classroom learning*. Mahwah, N.J.: Erlbaum.
- Geeklog Documentation. Retrieved February 6, 2005 from <http://www.geeklog.net/docs/>
- Keller, Helen (n.d.). Wisdom Quotes. Retrieved April 15, 2005 from <http://www.wisdomquotes.com/002273.html>
- Kotter, John P. (1996). *Leading Change*. Boston, Massachusetts: Harvard Business School Press.
- Lave, Jean & Wenger, Etienne (1991). *Situated Learning: Legitimate Peripheral Participation*. New York, NY: Cambridge University Press, p. 98
- Long Beach Unified School District (2005). Technology and Information Services. Retrieved January 5, 2005 from http://www.lbusd.k12.ca.us/district/departments/business_services/technology_and_information_services/index.asp
- Long Beach Unified School District (2005). Technology Curriculum Office. Retrieved January 5, 2005 from <http://www.lbusd.k12.ca.us/curriculum/Curriculum%20Services/Technology/mission.htm>
- Markham, Edwin (n.d.). Wisdom Quotes. Retrieved January 5, 2005 from http://www.wisdomquotes.com/cat_inclusion.html
- May, Rollo (n.d.). Wisdom Quotes. Retrieved January 5, 2005 from <http://www.wisdomquotes.com/001611.html>
- Remen, Rachel Naomi (n.d.). Wisdom Quotes. Retrieved January 5, 2005 from <http://www.wisdomquotes.com/002329.html>
- Warschauer, Mark (2003). *Technology and Social Inclusion: Rethinking the Digital Divide*. Cambridge, Massachusetts: The MIT Press, p. 146